TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
U.S. DEPARTMENT OF AGRICULTURE · · FOREST SERVICE
No. 450

Permanent Logging Roads Facilitate Economical Timber Salvage

Fire, disease, insects, and wind kill enormous volumes of standing timber each year. Provided that these trees can be salvaged promptly, the damage is restricted to loss of growing stock. Unfortunately, inaccessibility is often a serious stumbling block to effective, economical salvage work. The situation is aggravated when the material to be salvaged is spread thinly over large areas. Then the presence or absence of a system of access roads can spell the difference between utilization and waste, and between an equitable stumpage return or no return at all.

The value of existing secondary logging roads, requiring little or no maintenance but readily restorable to usable condition, is illustrated by a case in the Upper Peninsula of Michigan during the summer of 1953. On June 30 a small tornado moved across the Dukes Experimental Forest, causing the windthrow of approximately 453 thousand board-feet, net scale, of live hardwood and softwood timber, scattered over more than a thousand acres.

Because this timber would stain and decline in quality rapidly during the hot, humid summer months, it was quickly put in the hands of local operators. The prompt completion of the salvage operation and the realization of substantial stumpage receipts were, in large measure, attributable to the existence of an adequate system of forest logging roads.

Sale	Total net volume salvaged [1/]	Sale area	Net volume salvaged per acre	Logging roads utilized	Stumpage return per M b. m. net
	M b. m.	Acres	B. m.	Miles	Dollars
A	182.02	386	472	3.35	21.00
B	8.76	47	186	.49	17.00
C	51.75	29	1,784	-	20.90
D	65.43	268	244	1.66	18.99
E	6.36	32	199	.50	[2/] 10.00
F	24.73	76	325	1.04	[2/] 8.60
G [3/]	113.57	200	568	1.25	[4/] 25.32
Total	452.62	1,038		8.29	

1/ Conversion factors used for products other than sawtimber: pulp and chemical wood, 2 cords per M b. m.; cedar posts, 5 b. f. per piece.

2/ Both of these sales involved blowdown areas which escaped early detection, and since considerable quality decline had already occurred the stumpage rates were reduced.

3/ A tract of privately owned timber adjacent to the Experimental Forest.

4/ Estimated on the basis of Forest Service stumpage prices for comparable timber.

(OVER)

Notable among the items listed are the light volumes per acre and the relatively high stumpage returns. Had the construction of 8.29 miles of truck road been necessary to provide access to the down timber, much of it could not have been economically utilized, and the stumpage rates would have been much lower.

C. E. BOLDT, Research Forester
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April 1956